

## **REMARKS**

Applicant wishes to thank the Examiner for the attention accorded to the instant application, and respectfully requests reconsideration of the application as amended.

### **Formal Matters**

Claims 11-26 are the claims currently pending in the Application. Claims 11 and 20 are amended herein. Specifically, each claim is amended to recite that the performance evaluation is used to modify an architecture design of an LSI. Support for this amendment can be found in the specification on page 4, lines 1-13.

### **Summary of Telephone Interview**

Applicant thanks the Examiner for the telephone interview of May 1, 2007. In this interview, the Examiner indicated that the proposed amendments to claims 11 and 20 should be sufficient to overcome the rejection of the claims under 35 U.S.C. § 101. The Examiner stated that he did not review the proposed amended claims with respect to the prior art.

### **Rejection of Claims Under 35 U.S.C. §101**

Claims 11-26 are rejected under 35 U.S.C. § 101 because the claimed inventions are directed to non-statutory subject matter. This rejection should be withdrawn based on the comments and remarks herein.

Applicant amends independent claims 11 and 20, as discussed above, to recite the production of a useful, tangible result of modifying an architecture design of an LSI. Thus the claims recite an invention wherein "the performance evaluation is used to modify an architecture design of an LSI". Accordingly, applicant respectfully requests that this rejection be withdrawn.

**Rejection of Claims 11-21 and 23-26 Under 35 U.S.C. §103**

Claims 11-21 and 23-26 are rejected under 35 U.S.C. § 103(a) as unpatentable over Tammemae et al., “AKKA: A tool for cosynthesis and prototyping”, The Institute of Electrical Engineers, UK, 1996 (hereinafter “Tammemae”) in view of Raimi et al., U.S. Patent No. 5,604,895 (hereinafter “Raimi”). This rejection should be withdrawn based on the comments and remarks herein.

The present application provides an inventive method for simulating hardware and software to evaluate proposed hardware and software configurations and to produce a modified architecture design for an LSI. A performance evaluation of at least one bus at a high-level stage of the computer architecture design and development process is undertaken. The bus is part of source code structured to represent hardware and software units; the bus realizes the data traffic between the hardware and software units. The evaluation process includes creating an evaluation function for counting data traffic that occurs on one bus, analyzing syntax, modifying at least one element of the source code based on the evaluation function, and performing the performance evaluation by simulating source code elements and counting the data traffic on the bus. Hence, the useful result of modifying an architecture design of an LSI is produced.

The Examiner states that Tammemae does not expressly teach determining whether the source code is to be modified based on whether a line of source code represents writing data to variables that are defined in advance and are loaded onto the bus to be evaluated. However, the Examiner contends that Raimi teaches these steps, and that it would have been obvious to one of ordinary skill in the art to combine Tammemae with Raimi.

In the Office Action, the Examiner agrees with the applicant that Raimi discloses a physical bus of the development system (Office Action page 16), but the Examiner alleges that Tammemae teaches the bus being modeled between the hardware and software elements. Applicant respectfully disagrees. As the Examiner acknowledges, Tammemae does not teach or suggest determining whether the source code is to be modified based on whether a line of source code represents writing data to variables that are defined in advance and are loaded onto the bus to be evaluated. Instead, Tammemae teaches that “[t]he user can guide the algorithm to implement a specific object as hardware or software.” (page 4, lines 4-5, emphasis added) Thus Tammemae does not disclose or suggest the bus being modeled between the hardware and software elements.

Moreover, because Raimi does not teach or suggest evaluating the performance of a bus which is part of source code, he does not teach determining whether the source code is to be modified based on whether a line of source code represents writing data to variables that are defined in advance and are loaded onto the bus to be evaluated, as recited in claim 11, or writing data onto the bus to be evaluation as recited in claim 20.

As illustrated above, neither Tammemae nor Raimi, taking singly or in combination, teach or suggest all features of independent claims 11 and 20. Accordingly, these independent claims are patentable over the art of record in the application. Claims 12-19 depend from claim 11, and claims 21 and 23-26 depend from claim 20, each dependent claim incorporating all of the features and limitations of its base claim, so that these dependent claims are patentable over the prior art. Thus applicant requests that this rejection be withdrawn.

### **Rejection of Claim 22 Under 35 U.S.C. §103**

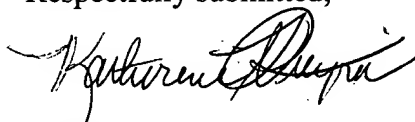
Claim 22 is rejected under 35 U.S.C. § 103(a) as unpatentable over Tammemae in view of Raimi and further in view of Chang, et al., U.S. Patent 6,269,467 (hereinafter "Chang"). This rejection should be withdrawn based on the comments and remarks herein.

As discussed above, the hypothetical combination of Tammemae and Raimi does not disclose or suggest each and every limitation of claim 20. Chang does not overcome this deficiency, and the Examiner does not suggest otherwise. Accordingly, independent claim 20 is patentable over the art of record in the application. Since claim 22 depends from claim 20 and incorporates all of the features and limitations of the base claim, dependent claim 22 is patentable over the art of record in the application for at least the reasons that claim 20 is patentable over the art of record. Hence, applicant requests that this rejection be withdrawn.

### **CONCLUSION**

For at least the reasons set forth in the foregoing discussion, Applicant believes that the application is now allowable and respectfully requests that the Examiner reconsider the rejections and allow the application. Should the Examiner have any questions regarding this Amendment, or regarding the Application generally, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,



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